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ABSTRACT

This paper examines strategies to enhance learning, based on innovations in technology. It represents an evolution of thought from the ancient masters, great thinking, and the Great Learning all the way to the present. A syllabus for the future is constructed, using a model of communication, the Rhetorical Systems Model. The model is based on a systems viewpoint that examines the inputs into the system, looks at how information is processed, and finally looks at the output of such a system. This paper discusses the educator's role; educational assumptions for advanced learning; philosophical and practical intentions; serving high-tech students; educational genres and practices; the educational product, or lesson; the learning experience; the feedback system; and movement toward a comprehensive model of instruction. (AEF)

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By

Dr. Gary R. Schornack
and
Charles E. Beck

University of Colorado at Denver

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# STRATEGIES FOR ADVANCED LEARNING: HOW ANCIENT WISDOM ENHANCES MODERN TECHNOLOGY

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# *Strategies for Advanced Learning:*

# *How Ancient Wisdom Enhances Modern Technology*

**Dr. Gary R. Schornack**

**Dr. Charles E. Beck**

May 15, 1997

*The ancient Masters were profound and subtle.*
*Their wisdom was unfathomable.*
*There is no way to describe it;*
*all we can describe is their appearance.*

*They were careful*
*as someone crossing an iced-covered stream.*
*Alert as a warrior in enemy territory.*
*Courteous as a guest.*
*Fluid as melting ice.*
*Shapable as a block of wood.*
*Receptive as a valley*
*Clear as a glass of water.*

- Book of Change

## INTRODUCTION

This paper attempts to bring together the best of the past as a way to examine current practice and to prepare for the future. It examines strategies to enhance learning, based on innovations in technology. It asks, how do we teach the technology of the future? How is the future different from the past? This paper represents an evolution of thought from the ancient masters, great thinking, and the Great Learning all the way to the present. In gathering the accumulated knowledge, the paper becomes a *Commonplace Book*, a compilation of thought according to some organizing principle. As we glean the accumulated knowledge of the ages, we do so in the same spirit as George Howie in approaching the educational theory of St. Augustine:

> *This study of the educational thought and practice of St. Augustine is inspired by the belief that, in spite of the complex and unique problems of education in our age of technological advance and nuclear menace, the essential features of human life are the same today as they were yesterday. If this is so, the most penetrating thought on the aims and methods of education, irrespective of its age, should shed light on the problems with which we have to grapple today.*
>
> - (Howie, p. vii)

In incorporating technological advances into the art and science of teaching we must begin with a clear understanding of the nature of the university, and how the university functions within the educational process. For this we turn to the American mathematician and philosopher, Alfred North Whitehead:

> *The justification for a university is that it preserves the connection between knowledge and the zest for life, by uniting the young and the old in the imaginative consideration of learning. The university imparts information, but it imparts it imaginatively. At least this is the function which it should perform for society A university which fails in this respect has no reason for existence. The atmosphere of excitement, arising form imaginative consideration, transforms knowledge. A fact is no longer a bare fact: it is invested with all its possibilities. It is no longer a burden on memory: it is energizing as the poet of our dreams, and as the architect of our purposes.*
>
> - (Whitehead, p. 93)

While Whitehead was coming from his experiences at Cambridge and Harvard UniversityMay 14, 1997 near the beginning of the Twentieth Century, at the end of this century we are still examining how education appears to be in crisis. Our crisis focuses on how to merge the best of the new — advancing technology — with the best of the past — and the wisdom accumulated over the ages.

> *Education always seems to be `in crisis'. It is easy to see why this should be the case. In a general sense, what kind of educational system and processes we have embody the kind of nation we are. At an*

> *individual level, life-chances, to a great extent, depend on the education we receive. But if it is a common feature of education to be `in crisis', the last ten years have been positively cataclysmic. There has been educational change on a grand scale. A prescribed National Curriculum with standardized assessment procedures has been set in place. The control and organization of schooling has been overhauled. Teachers are developing new roles, new career structures, new cultures in adapting to the changes (D. Hargreaves 1994). Other developments, such as globalization, technological advance, and social and economic change, add to the press for the restructuring of schools and teachers' work. Educational crisis is not going to go away, but rather intensify, in the post-industrial, postmodern age (A. Hargreaves 1994).*
>
> *However, if all are agreed that we need to raise educational standards, improve the quality of teaching and learning, and produce people with the knowledge and skills necessary for the new age, there are serious differences of opinion as to how it should be done, and indeed what those aims actually mean. Different sets of values, different political convictions point in different directions, leading to heated and heartfelt debate -- another aspect of the sense of crisis.*
>
> - (Woods p. ix)

The need to balance the past, present, and future is a constant in the study of education. In particular, Maria Montessori addresses this balance in her syllabus for the future:

> *The conception of the old schools, where teaching continues in the same way as in times profoundly different from ours, are clearly inadequate in view of the aims of the new movement we have outlined above.*

Montessori, however, takes a global view, not a narrow view, of this entire process:

> *It [eduction] must furthermore be oriented towards a clear understanding of our civilization so that the personality defended against the disorder of circumstances may become a human being conscious of his real position in history. Evidently a syllabus or curriculum arbitrarily drawn up cannot ensure the culture we need today. There is need of a syllabus which can give an understanding of the conditions of man in modern society with a cosmic vision of history and the evolution of human life.*

Montessori continues with this global and even cosmic perspective:

> *Finally, the problems of education must be solved on the basis of the laws of cosmic order. These laws reach from the eternal laws governing the psychic construction of human life to the changing laws which lead society along the road of evolution on earth.*

> *Respect for these cosmic laws is fundamental. Only when we hold to these as basis can we judge and modify the multitude of human laws which deal with the passing moments of external social construction.*
>
> - (Montessori, p. 9)

This paper attempts to construct the syllabus for the future that Montessori is asking for, but it does so with an unusual perspective. It attempts to take the best of accumulated wisdom from ancient masters, both eastern and western, as well as recent thinkers, combined with those who advocate a high degree of innovation with technology, and particularly with accelerated learning techniques. In creating such a combination, we will be using a model of communication, the Rhetorical Systems Model, as a way of integrating these words of the masters. This model is based on a systems viewpoint that examines the inputs into the system, looks at how we process information -- and especially in education, where the process is extremely complex -- and finally looks at the output of such a system. The model becomes a frame for holding the accumulated wisdom of the ages.

In creating this accumulation of wisdom, we don't want to leave the impression that this is *the answer*, nor do we attempt to reconcile the sometimes conflicting perspectives that the various masters will bring. As Ron Zemke so eloquently states,

> *Nobody is more than a little right. Everybody is far more ignorant, let us even say wrong, than he thinks he is. There are many, many more roads of righteousness than the one any particular individual is travelling.*
>
> - (Zemke, p. 36)

## A SYSTEMS MODEL FOR EDUCATIONAL INSTRUCTION

Since Education is a communication process, our analysis of ancient wisdom will build on some communication models. At the most basic level, education is a system, with inputs, an educational process, output learning, and feedback to evaluate the process; thus the educational instructional process builds on a basic systems model, shown in Figure 1.

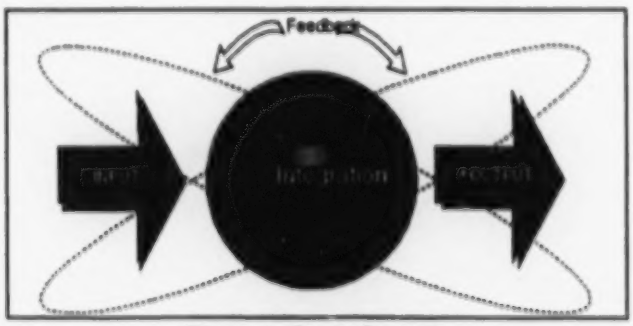



**Figure 1: Basic Systems**

For the Basic Systems Model to help clarify the educational instructional processes, we need to clarify each of these elements, thus expanding the model. Inputs include the teacher's background and preparation for the task, along with the teacher's assumptions about education. The integration process includes the educational purpose (specific objectives for particular students) along with the educational method (lesson plans and mode of presentation). The integration process results in a the actual lesson, the educational process; the interpretation of this process includes the students' learning as well as evaluations of the type of lesson, such as effectiveness of the plan or adequacy of the method used. Feedback based on standardized tests or ability to perform tasks enables the educator to adapt the process for future lessons. To visualize this more extended understanding of the educational process, we will follow the Rhetorical Systems Model of Communication, shown in Figure 2.

To visualize the process, the categories of the Basic Systems Model must expand, with the *integration* portion expanding the most. For education, this integration becomes *purpose* and *method*. Furthermore, each of these components further divides, where purpose includes *intentions* and *audience*, while method includes *genre* and *process*. Integration therefore divides into five components – four distinct cells surrounding a reaction-decision center which embodies communication. In addition, the entire model divides horizontally into subjective and objective domains.

**Integration Greatly Expands the Most**

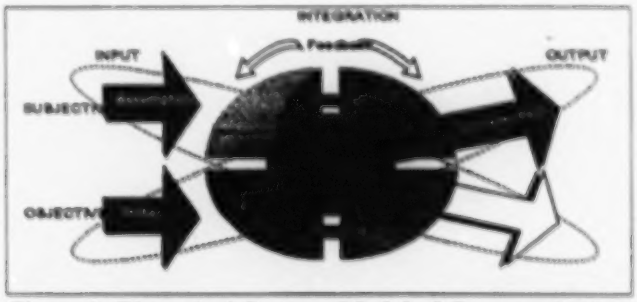



Figure 2: **Rhetorical Systems Model of Communication**

For the teacher, the center of the educational process is purpose and method. In clarifying intentions, the educator determines the educational objectives; but such objectives pertain to a specific audience, the student. In fulfilling these objectives, the educational method includes genre and process: the genre includes instructional methods such as lecture, discussion, exercises, group projects, or video. The process (usually outlined in lesson plans) concerns how to achieve the objectives for the audience, as through reading, problem solving, model building, and case analysis

Ultimately, the educator engages in some mental process of capturing ideas in words or images, through a genre, to meet specific objectives related to a specific student audience. By balancing the intentions, audience, genre, and process the teacher

embodies an output, the educational product. Embodiment is the feed-forward of the system, balanced later by feedback.

**The Objective-Subjective Domains Have Different Implications**

In addition to the enlarged integration of the basic systems model, the Rhetorical Systems Model divides horizontally along objective and subjective domains. These comparative terms help clarify how human communication differs from the mechanical aspect inherent in traditional systems theory. The teacher follows a process (lesson plans), using a genre or mode of the presentation, and produces an output product, the educational lesson. For the most part, this series can be considered "objective." We can verify demographic information about the teacher and circumstances surrounding the lesson; and we can we observe the actual lesson.

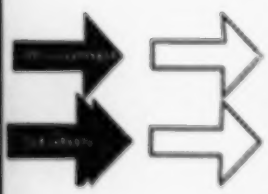
The subjective level is more elusive. Regardless of the objective inputs, the teacher brings their own set of assumptions to the lesson. Assumptions include likes-dislikes, positive-negative judgments, and philosophy of education. The intentions include multiple objectives, such as student achievement or making an impression on colleagues. The student audience may be accurately assessed or misread entirely, seen as capable or incapable, gifted or inept. The resulting educational lesson has its own interpretation: effective or ineffective; on target or off base. Students may like or dislike the lesson, remember it long term or forget it tomorrow. And despite our hopes for objectivity, education ultimately remains a subjective process -- the lesson perceived and interpreted, not the lesson itself.

**Feedback Enables Change**

Feedback provides the mechanism of change in a system. In an educational lesson, students react constantly and immediately to words, ideas, impressions, visual cues, tone of voice, setting. Feedback may bring a smile of recognition or a frown of annoyance. Standardized tests give feedback about overall student performance, and course critiques give more personalized response to the instructional process.

**THE EDUCATOR'S ROLE**

> *Specifically, the teacher has as much to learn from student, as student from teacher. Teacher and taught are in fact learning and growing together.*
>
> - (Arundale, p. 40)



The givens of education are the status elements. The educator brings his or her own history and experience to the encounter: such items as birth date, cultural background, education, occupation, and organizational role are the givens. Furthermore, the status includes the physical elements of the educational environment (day or night schedule, spacious or cramped setting, full-time or part-time courses). Although status inherently conveys a sense of permanence, individuals and societies

constantly change. For the individual, as we learn new things, our knowledge or value base change slightly, but not the fact that we attended a particular school and graduated on a given date.

For the nature of the teacher the teacher needs to recognize where he or she falls into the scheme of things and here we rely on Joan Crandle for some ideas in giving us that placement. To begin with,

> *We live in a world of movement, of feeling. As humans we are the vessels of all feeling: physical sensations such as temperature, pressure, touch; mind/ego attitudes such as anger, isolation, fear; and feelings of the heart like grief, love, sorrow, joy.*
>
> - (Crandall, p. 40)

Ultimately the teacher must recognize the feeling on the emotional side as well as the cognitive and where there is a breakdown for the teacher it is often exclusively focusing on the cognitive.

The teacher's focus on self must fit within a wider scheme in the order of nature. We can rely on further insight from Thomas Troward:

> *A correct understanding of the law of growth is of the highest importance to the student of Mental Science. The great fact to be realized regarding Nature is that it is natural. You may pervert the order of Nature but it will prevail in the long run.*
>
> - (Troward, p. 40)

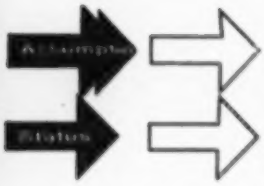
As Troward continues with the dictum "*Nature is the principle of growth,*" we will be recognizing this principle as we continue to develop the Rhetorical System Model and in particular leading toward the accelerated learning as an extremely important principle strategy for advanced learning. Giving of growth is the natural process for the teacher, as indicated by Arundale in the headnote above.

In this learning process the teacher needs to have a correct sense of balance both with the student and with the natural order of things but in doing so can not become too serious so as Mettcalf indicates,

> *The person who has a sense of humor is not just more relaxed int he face of potentially stressful situations, but is more flexible in his approach. Even when there is not a lot going on in his environment, his imagination and innovativeness will help keep him out of a mental rut, will allow him to enjoy himself, and so will prevent boredom and depression.*
>
> - (Metcalf, p. 9)

## INSTRUCTIONAL ASSUMPTIONS FOR ADVANCED LEARNING

> *We learn nothing rightly until we learn the symbolical character of life.*
>
> - (Emerson, "American Scholar," p. 209)



In contrast to status, the subjective assumptions tend to change more often and tend to be open to differing interpretations. Assumptions include likes-dislikes, positive-negative judgments, sense of accurate assessment vs prejudice. Assumptions include philosophy of education, as well as degree of confidence or sense of adequacy in facing the educational task.

Our discussion begins with a quotation from Ta S'eu through the translation of Ezra Pound:

> *My master the philosopher Ch'ang says: The Great Learning, Great Digest, is the testament of Confucius, transmitted, the initial study for whomso would pass the gate into virtue. If we today can see how the men of old went about their study, it is due solely to the conservation of these strips of bamboo.*
>
> - (Ta S'eu, p. 37)

We recognize that the original words were preserved according to the technology of that time – bamboo strips. Now that they have been preserved and become available through modern technology, it is up to us to take these and to begin to apply them in our own instructional endeavor.

> *The great learning [adult study, grinding the corn in the head's mortar to fit it for use] takes root in clarifying the way wherein the intelligence increases through the process of looking straight into one's own heart and acting on the results; it is rooted in watching with affection the way people grow; it is rooted in coming to rest, being at ease in perfect equity.*
>
> - (Confucius, tr. by Ezra Pound, p. 38)

### Great Learning

As Confucius indicates great learning is a process, and this process starts with the inner self. The starting point is essential if the teacher is to apply high level technology to the learning process. Furthermore, the process must be comprehensive as indicated by Laozi:

> *Confucianism promotes specific moral values and insists that learning and cultivating those values is the only way to make individuals and society truly human and harmonious. Chief among those values are ren (jen) (humankind-ness), yi (i) (appropriateness, or the balancing of*

> *the individual with the group ), and li (social rules, rituals, and etiquette).*
>
> - (Laozi, p. 13)

Appropriate learning involves a thinking process as well as training of the individual mind. In this case we start from the process that Emerson describes in his essay "The American Scholar":

> *The Scholar is the delegated intellect. In the right stage he is* ***Man Thinking****.*
>
> - (Emerson, "American Scholar," p. 79)

To train someone in this intellectual function requires the training of the mind, here following the ideas presented by Van der Leeuw:

> *But even while studying and reading we must always remember that no reading, however wide, and no study, however intense, can do more than furnish our intellect with the material necessary to make it a good and useful instrument, and that real knowledge has to come from the higher mind.*
>
> - (Van der Leeuw, pp. 118-119)

In dealing with the higher learning in the training of the mind there is a danger a very significant danger and that is creating fast distinctions between the teacher and the learner. Here we again turn to eastern philosophy:

> *"Holding ideals in high esteem makes the people contentious." Ideals require striving, ascending a valuative ladder; and the ladder has value only if some people are higher than others on it. Among the group that deems the ideal worthwhile there will inevitably be rivalry and competition for the higher berth, those above "looking down" on their fellow strivers. When people are contentious, harmony becomes endangered.*
>
> - (Laozi, p. 13)

To combine a since of equality between teacher and student as well as the sense of being integrated in the educational process, the teacher needs to have a sense of self-awareness. And Pierrakos gives us two different guidelines to reach this equilibrium.

> *To find out if such unconscious images exist in you on a deeper level you can use an infallible key that will give you faultless answers. This key is: How do you feel about yourself and about your life? How meaningful, fulfilled, and rich is your life? Do you feel secure with others? Do you feel comfortable about your most intimate self in the presence of others, or at least with certain people with whom you have a goal in common? How much joy are you capable of feeling, giving,*

> *and receiving? Are you plagued with resentments, anxiety, and tension, or with loneliness and a sense of isolation?*
>
> *Exhilaration, enthusiasm, joyfulness, and the unique blend of excitement and peace that connotes spiritual wholeness are a result of inner truthfulness. When these states are absent, then truthfulness must be absent. It is as simple as that, my friends.*
>
> - (Pierrakos, p. 12)

Once the teacher has the sense of self-integration then the teacher begins to focus on the broader concepts of what education is trying to achieve. Here we turn again toward Eastern thought to provide a methodology for achieving this integrated educational endeavor.

> *A correct methodology should be marked by characteristics, which may be seen as elaborations of Zhu Xi's instructions, namely: study wisely, question thoroughly, think carefully, judge clearly, and act seriously.*
>
> - (Ekken, p. 368)

Again we are looking at a comprehensive approach to education combining very general principles and very specific guidelines. But in all we need to keep in mind

> *Humor is a set of skills, but it is also an out look on the world.*
>
> - (Ekken, p. 368)

Ekken gives us the ultimate perspective of not taking our souls too seriously in the process.

## PHILOSOPHICAL AND PRACTICAL INTENTIONS

> *One should first know the target toward which to aim, that is, one's ultimate destination.*
>
> - (Ta Hio, tr. by Ezra Pound, p. 7)

The intentions include multiple objectives, such as student achievement, making an impression, achieving ratings on course critiques. These intentions may be strongly or weakly held; they may reflect the individual's convictions or those of the organization. Intentions may be realistic or unrealistic, moral or immoral, overt or covert.

The educational objectives occur within an institutional context so we begin by looking at Emerson's concept of a college in the American score.

> *Colleges, in like manner, have their indispensable office, -- to teach elements. But they can only serve us when they aim not to drill, but to create.*
>
> - (Emerson, "The American Scholar," p. 85)

The type of creation that Emerson envisions appears in the words of Alice Bailey,

> *The second obligation of educators will be to bring about his true culture, by training him to use his intellect rightly.*
>
> - (Bailey, p. 99)

The creation is not just haphazard but has focus in the philosophy of education that the educator brings to the encounter..

From the Eastern perspective we recognize again a philosophy that integrates diverse elements. In particular the wisdom of the ancients with the nature of the world as it is.

> *Yet in terms of the content of education, he sought to bring together both the study of classical texts and the natural world. He advocated a practical learning that would foster self-cultivation while also assisting others. He urged that learning should be "preserved in the heart and carried out in action." Traditional humanistic values and specifically technical skills should be used for the benefit of both self and society. In this way the scholar would be assisting the Confucian aspiration to participate in the transformation of Heaven and Earth.*
>
> *In order to bring together humanistic and scientific concerns Ekken felt that a physician, for example, should practice humaneness while helping to "nourish life" (yojo no jutsu). His skills could not be dispensed without an understanding of his larger ethical role.*
>
> - (Ekken, p. 368)

In achieving the diversity of education the teacher must not take a absolutist position. We cannot use force as a way that violates the integrity of the learner. George Arundale now indicates,

> *No cruelty. No education through fear -- the two words are mutually contradictory. No punishment, though sometimes restraint. Freedom, yes; but ordered, purposeful freedom.*
>
> - (Arundale, p. 34)

Ultimately the educator, particularly at the college level, must instill an enormous amount of knowledge. We must have great respect for the individuals involved, both the the self of the teacher and the self of the student. Furthermore, the teacher must encourage a zest for life. Here we draw on the words of Albert Whitehead famed as a mathematician for giving insight into the zest for life that the educators must bring.

> *The justification for a university is that it preserves the connection between knowledge and the zest for life, by uniting the young and the old in the imaginative consideration of learning. The university imparts information, but it imparts it imaginatively. At least this is the function*

> *which it should perform for society A university which fails in this respect has no reason for existence. The atmosphere of excitement, arising form imaginative consideration, transforms knowledge. A fact is no longer a are fact: it is invested with all its possibilities. It is no longer a burden on memory: it is energizing as the poet of our dreams, and as the architect of our purposes.*
>
> - (Whitehead, p. 93)

In this sense of educational philosophy, John Henry Newman divides two types of education in his *Idea of a University*:

> *You see, then, here are two methods of education; the end of one is to be philosophical, of the other to be mechanical; the one rises toward general ideas, the other is exhausted on what is particular and external....I only say that knowledge, in proportion as it tends more and more to be particular, ceases to be knowledge.*
>
> - (Newman, p. 138)

Within this focus on the practical side, Annie Besant gives us her insight into how to define this practicality:

> *Nothing is taught but what is likely to be practically useful to the average person.*
>
> - (Besant, p. 420)

The same point is reiterated by Florence Huntley in the harmonics of evolution:

> *This philosophy of individual life is, therefore, something more than a compilation of scientific fact or an array of intellectual opinion, to be lightly scanned and soon forgotten.*
>
> - (Huntley, p. 460)

The focus on practicality for education appears in the words of Ouspensky in the fourth way:

> *As I've often said, the first condition is that we must never forget what we want to get. People come to this from different sides. Some want to know. They realize there is a certain knowledge and that, maybe, there are somewhere people who know, and they want to get this knowledge. Other people realize their weakness and understand that if they can get rid of them things will be different. So people come with different aims and they must never forget the beginning.*
>
> - (Ouspensky, p. 347)

## INDIVIDUALIZED LEARNING

The differences that individuals brings to the education process appear in the words of George Arundale.

> *We are educating a unique individuality.*
>
> *They must help him to rediscover in this outer world his own eternal life and to continue its unfoldment--however different it may be from their own modes of living and unfoldment.*
>
> - (Arundale, p. 28)

To achieve the individualized learning, particularly learning that doesn't match the mode of the teacher, we must recognize and strive for innovative learning being open to new techniques, new technology in incorporating those into what we already know. Here we look toward Botkin in examining how innovation will apply not just individually but globally.

> *What we do assert is that **innovative learning is a necessary means of preparing individuals and societies to act in concert in new situations,** especially those that have been, and continue to be, created by humanity itself. Innovative learning, we shall argue, is an indispensable prerequisite to resolving any of the global issues.*
>
> - (Botkin, p. 12)

### Process... Process... Process

The variety of thinkers and educational philosophers have given different perspectives on process. Their range of ideas appear below.

> *You have come not merely to be taught but to learn. You have come to exert your minds. You have come to make what you hear your own, by putting out your hand, as it were, to grasp it and appreciate it. You do not come merely to hear a lecture, or to read a book, but you come for that catechetical instruction, which consists in a sort of conversation between your lecturer and you.*
>
> - (Newman, p. 440)
>
> *It is a good plan to constantly furnish the mind with some high thought, some word of cheer, some inspiration of noble living.*
>
> - (Besant, p. x)
>
> *De (Te) (power or virtue) cannot be strived for, but emerges naturally. The best "Way" to act or think is wuwei (wu-wei) (effortless activity). Rather than develop sophistication, erudition, or cunning, one should return to the "uncarved block" or . . . . . .*
>
> - (Laozi, p. 9)

*There is nothing we ought more to strive for than to lift the student of wisdom above the emotions of the common crowd.*

- (Tobriner, p. 85)

*Follow thine heart during thy lifetime; do thou more than is commanded of thee.*

- (Doreal, p. 17)

*The entire objective of education may be summed up in one word "Reverence". Reverence is the way and end of growth, the power and purpose of evolution, the joy and the peace of life.*

*But only as education stimulates reverence is it real and purposeful.*

- (Arundale, p. 40)

*You may not divide the seamless coat of learning. What education has to impart is an intimate sense for the power of ideas, for the beauty of ideas, and for the structure of ideas, together with a particular body of knowledge which has peculiar reference to the life of the being possessing it.*

- (Whitehead, pp. 11-12)

*The essence of education is that it be religious.*

*Pray, what is religious education?*

*A religious education is an education which inculcates a sense of duty and reverence. Duty arises from our potential control over the course of events. Where attainable knowledge could have changed the issue, ignorance had the guilt of vice. And the foundation of reverence is this perception, that the present holds within itself the complete sum of existence, backwards and forwards, that whole amplitude of time, which is eternity.*

- (Whitehead, p. 14)

*In these days education is more directed towards analysis, dissection and criticism, using this word in its generally accepted meaning, than towards appreciation. Education for appreciation should be our motto in this department.*

- (Arundale, p. 37)

*The objective is to establish a public access network and facilities which would make electronic services and information freely accessible to all citizens.*

- (*Tech Trends*, p. 11)

## SERVING HIGH-TECH STUDENTS

Educating the student is the ostensive purpose of any educational system. But how one views the student will affect the impact of that education. The student audience may be seen as capable or incapable, gifted or underachievers. The students may be accurately assessed or misread entirely.

The educator must clarify the focus of education and constantly keep in mind the nature of the students. Here Arundale gives us the beginning ideas concerning what and does an educational system educates:

> *He is an independent, and indeed a unique, individuality which has already traveled a long way on the path of life, has reached a certain level in the human kingdom after having gathered the experiences appropriate to the animal, vegetable and mineral kingdoms, is climbing still higher in the human kingdom.*
>
> - (Arundale, p. 27)

Although the educator is looking toward trying to meet the needs of the high-tech students he must recognize the nature of the student as identified by Confucius centuries ago:

> *Some are born with instinctive knowledge, others learn by study, others are stupid and learn with great difficulty but the scope of knowledge is one, it does not matter how one knows, the cult of knowledge is one.*
>
> *Some proceed calmly setting themselves in harmony with the process [of nature, without doing violence to themselves] others behave well in the hope of profit, others forcing themselves against the grain, but the finished labor is one.*
>
> - (Confucius, tr by Ezra Pound, p. 24)

The nature of this individual student is a composite including physiological, intellectual, and particularly emotional here as George Arundale now indicates,

> *We are educating a mixture composed of physical body, feelings and emotions, and mind, with possibly just a trace of something more.*
>
> - (Arundale, p. 30)

The power, particularly of the emotional knowledge appears in the words of Eva and Perrakos,

> *Yet the more the emotional knowledge is hidden the more potent it becomes.*
>
> *In the healthy life of every human being there must be exchange, intimacy, communication, sharing, mutual love, mutual*

> *pleasure, and the giving as well as the receiving of warmth and openness. Also, every human being needs recognition of what he or she does. But there is an enormous difference between wanting this recognition in a healthy way and in depending on outside recognition.*
>
> - (Eva and Perrakos, p. 13)

**MASLOW REVISITED**

The discussion by Eva and Perrakos resembles Abraham MASLOW's famous hierarchy of basic needs, which many educators often take as a basis in motivating students. However, educators often fail to recognize that Maslow has two other listings of needs, the basic cognitive needs and the aesthetic needs:

***Basic Cognitive Needs***

- *Human curiosity*
- *Overwhelming desire for knowledge, even despite danger*
- *Attraction to the mysterious, the unknown, chaotic, unorganized, unexplained (vs boredom)*
- *Extrapolations from the pathological (compulsive attachment to the familiar vs the unconventionality, defiance of authority, desire to shock)*
- *Need to know and understand appears in late infancy and childhood, more strongly in adulthood.*
- *Pathological effects stem from frustrating the cognitive needs*

***Basic Aesthetic Needs***

*The desire for*
*order*
*symmetry*
*closure*
*completeness of an act*
*system*
*structure*

- (Maslow, pp. 110-115)

In meeting the needs of students, the educator must lead the student in such a way that the student ultimately takes responsibility for his or her own education. According to Paul Brunton,

> *The study of the self will one day prove the master key to open all philosophical doors.*
>
> *What is most difficult of all things?*
> *And the Malaysian sage replied*

*"To know Thyself!"*

- (Brunton, pp. 50-52)

In knowing thyself, the educator does well to keep in mind the perspective that Whitehead brings:

> *The tragedy of the world is that those who are imaginative have but slight experience, and those who are experienced have feeble imaginations.*
>
> - (Whitehead, p. 93)

The educator therefore helps in both dimensions to insure a wide range of experience and a process that will help develop the imagination.

In trying to reach a diverse range of students, the educator must leave students with a sense of empowerment. As James Belasco indicates,

> *Empower changed by looking squarely in the mirror and asking, "What am I doing that either empowers people to change or prevents them from changing?"*
> *It won't be easy.*
>
> - (Belasco, p. 235)

The educator embarks on this path that is not easy but needs to insure that students can ultimately take charge of their own educational process through empowerment.

## EDUCATIONAL MODES OR GENRES

> *The best education is to be found in gaining the utmost information from the simplest apparatus.*
>
> - (Whitehead, p. 11)

The genre concerns the mode of educational presentation, whether through individual reading, teacher lecture, group project, or video. Differing genres have their own inherent strengths and limitations, but these qualities also depend on the educational objectives in a given situation.

As with other places within our educational model, when we are looking at genres we need to recongnize a combination of the traditional and innovative according to Mark Collens and Penny Lacie.

> *It is vital whoever that we satisfy ourselves to we are not simply dismissing old in favor of the next fashion in teaching approaches.*
>
> *The best education is to be found in gaining the utmost information from the simplest apparatus.*

– (Collins and Lacie, p. 11)

The concept of mixing the old with the new, the traditional with the innovative, the theoretical and the practical, is not just a recent idea. It has a theme in ancient history.

> *With regard to the to the first principle, the need for broad knowledge Ekken felt that one must not eliminate either traditional learning or practical or temporary concerns. What is particularly striking about Ekken's breath is his conscious effort to include knowledge pertinent to the ordinary Japanese of this day. In deed he felt that it was his mission to study useful popular culture customs and agricultural techniques as well as to transmit Confucian moral values to the ordinary person.*
>
> (Ekken, p. 369)

Overall genre includes the form by which we prepare our ideas, we go about the educational process by following a format we set up expectations for the learner. Through those specific, clearly stated expectations the process becomes that much easier. Laozi indicates how this process occurs through his discussion of the Dao.

> *In its most basic sense Dao means "the Way things do what they do: there is a Way to cook, a Way to fight, a Way to farm, a Way that water behaves, a Way to tie shoes, a Way that certain thoughts and actions prduce effects in the world, and so on. When one has the Way to tie shoes, for instance, one can do so effortlessly and effectively. Once done, one forgets about it and moves on; one neither demands nor expects credit or blame, nor lingers on the moment of the act, basking in its glory. On the other hand, if one lacks the Way, one's effort will prove ineffective and wearisome, perhaps even disastrous.*
>
> - (Laozi, p. 11)

For effective educational methodology the genre must include an appeal to multiple senses and numerous offers have indicated ways in which to achieve this. The means of imputing knowledge starts with perception.

> *This is that change of state which the operations of the five sensuous organs produce in the mind.*
>
> *This form can be perceived through every sense. The eye can see form, the tongue can taste it, the skin can touch it, and so on.*
>
> - (Rama Persaud, p. 101)

In the inclusion of technology into education we often focus on an appeal to sight to visual images and to tangable materials the *hands on experience* but in this process we forget a significant element of the senses that is the sense of rhythm, music, and harmony. This area tends to combine senses and provide a more meaningful and memorable educational experience.

> *Our bodies are rhythm instruments.*

*Music connects us in direct and discernable ways with our own rhythmic instruments the body and also with the outer world.*

*Rhythm involves repetition: it is the base, the ground from which all else emerges.*

- (Joan Crandel, p. 10)

*We are all seeking harmony in our lives. Within ourselves and our relationship with others, with the entirety of our existence. We tend to gravitate toward those whom we are in accord, with whom we resinate.*

- (Joan Crandel, p. 36)

*Most of the rituals performed by native culture are associated with nature. These rituals are accompanied by music, chanting, singing, playing rattles, flutes, drums. The use of music as a connection between the earth and its inhabitants has vanished from many cultures, but recently there has been renewed interest in joining ourselves with mother earth through music. We are playing our flutes for the dolphins and wales, we are celebrating the seasons in cycles of the mother with rituals of music, poetry, drama, dance. The western world is becoming more and more familiar with the music of the east with sounds that imitate or emulate nature. The Vina of India, the shackahuchie flute, and koto of Japan.*

- (Joan Crandel, p. 46-47)

*Music has been a prime vehicle for the expression and communication of healing throughout all of recorded history and even in prehistoric times the mythic ages.*

*We may be aware of certain music upon us but its influence begins at deeply submerged areas of our psyche.*

- (Joan Crandel, p. 41)

Although the appeal to the senses and the inclusion to the senses provides a dominent way to integrate experience and to create a memorable experience there is always a danger particularly by eastern philosophies.

*Endless drama in a group clouds conscientious. To much noise overwhelms the senses. Continual input obscures genuine insights.*

- (John Heider, p. 23)

**Delivery of information**

Typically, information in an educational context comes either through traditional book learning, through classroom lectures, or through traditional lectures. In modern times we have begun to incorporate more a sense of the mass media as the appropriate genre for communication and on the experiential level, increased use of working in teams and

groups. We begin our discussion of traditional instruction through books with Emerson in the American Scholar.

> *Books are the best type of influence of the past, and perhaps we shall get at the truth, — learn the amount of this influence more conveniently, — by considering their value alone.*
>
> *Books are the best of things, well used; abused, among the worst. What is the right use? What is the one end which all means go to effect? They are for nothing but to inspire.*
>
> *Books are for the scholar's idle times.*
>
> - (Emerson, "The American Scholar," pp. 80-84 )

The education of the future includes a significant emphasis on mass media as the mechanism for an educational genre.

> *There is little question that the mass media have a profound influence on how we view the future, which in turn will have a strong impact on its quality.*
>
> - (Bodkin, p. 97)
>
> *To date the library have showcased the use of Videoconferencing in a series of electronic town halls linking students and citizens with elected officials.*
>
> - (*Tech Trends*, p. 11)

**The Experience of Information**

In addition to multiple senses and multiple media and genre for educational experience. We are recognizing that education is not an isolated individual event but is a social phenomenon. Here Maria Montisori gives us the initial insight

> *If science began to study man, it would not only succeed in offering new techniques for the education of children and the young, it would further lead to profound understanding of many human and social phenomena that are still enveloped in obscurity.*
>
> - (Montisori, p. 7)

The social aspect of education is significant but relatively new in terms of understanding how it impacts our learning process. But increasingly, theorists are advocating the use of collaborative techniques.

> *Accelerated learning emphasizes collaborative activities and mutual exchange among trainees. It relies on action exercise and devices such as metaphors, themes, mnemonics, props, music and color to create an enjoyable setting conductive to learning and increasing both the relevancy and retention of knowledge.*

- (Zemkie, p. 95)

> *Groups and group learning have become an element almost inseperable from the basic concepts of the basic preseptives of adult education.*
>
> *While group learning lies at the heart of adult education, the process itself is almost taken for granted. Understanding this shift to taken-for-grantedness can shed light on our current understanding of the meanings of methods of adult education.*
>
> - (Rose, pp. 111-112)

The use of group methods implies interaction from many individuals and that leads to an element of uncertainty from the point of view of an educator. Not that uncertainty is necessarily a negative in its own right. It merely recognizes that it exists. Susan Emo and Elizabeth Tizdel indicate some of the uncertainty involved in the group process.

> *Our experiences working with groups have demonstrated that to many factors lie outside our influence for us to attempt to control their outcomes. Yet reflecting on our practice in this relationship to theory has enabled us to enhance the experiences of learning groups.*
>
> - (Imel and Tisdale, p. 23)

As with so many aspects of education, the teacher must recognize ultimately the lack of control over the overall process. The teacher has a domonent influence, but not total control. Mark Collons and Penny Lacie outline some of the significant ways to achieve a collaborative education. Here we summarize their approach (p. 14).

**Some of the more common features of interactive approaches**

- Positive cycles of success breeding success.
- Use of games and everyday routines.
- Importance of naturalistic observations.
- Adult follows or capitalises on the initiations of the learner.
- Learner plays an active role in the choice of what is to be learned.
- Dialogue between less experienced and more experienced.
- Allows for learning through mistakes, within a safe environment.
- Leads to social and emotional maturity, through the development of independent learning and personal autonomy.

## THE EDUCATIONAL PROCESS

> *Everything in the universe follows certain patterns and process that escape precise definition imprecisely this is called Dao (Tao), the Way.*
>
> — (Laozi, p. 9)

The process for educators appears in the lesson plans, which identify the sequence of instruction, the overall logic that guides the specific activities. The process may be deductive or inductive, clear logic or pure association. The process of a given educator may create a sense of expansion or sense of constriction.

What is the process? In following the ancients we have a number of guides. Te Ching in his *How Things Happen* or *Work*, gives us an opening perspective.

1. *Natural law or how things happen;*
2. *A way of life or how to live in conscious harmony with natural law;*
3. *A method of leadership, or how to govern or educate others in accordance with natural law.*

\- (Heider, pp. i-ii)

These according to The Way are overriding guides to the process withing the educational endeavor.

In the educational process in the future we need to recognize what Alice Bailey has stated,

> *Where there is no vision the people parish*
>
> \- (Bailey, p. 101)

So the role of educators particularly an incorporating technology in education is to establish this vision and to establish a future education that will survive. Here we continue with the ideas from Alice Bailey:

> *In the future education will make a far wider use of psychology then here to far.*
>
> *A better educational system should therefore be worked out which will present the possibilities of human living in such a manner that barriers will be broken down prejudice is removed and training... to live with other men in harmony and goodwill.*
>
> \- (Bailey, p. 101)

**Law of the Human Mind**

Educators must constantly recognize that learning is a rather broad concept rather than a narrow. The processes involves more than a narrow focus on logic. In looking at this broader concept Whitehead gives us a specific focus

> *Let the main ideas which are introduced into a child's education be few and important, and let them be thrown into every combination possible. The child should make them his own, and should understand their application here and now in the circumstances of his actual life. From the very beginning of his education the child should experience the joy of discovery.*
>
> - (Whitehead, p. 2)

For Whitehead this process involved all aspects of the mental processes including the learning general concepts, specific applications, and the emotional reaction to joy and working with these processes. Judith Watson also gives us a similar idea in her interpretation of the reflective process:

> *Experiences which are meaningful and add to our understanding are on the whole, those which are congregant but not identical with those we already poses... emotional factors also play a very important role.*
>
> - (Watson, p. 11)

The emotional factors are important in the educational process particularly in providing the broader climate through which thought can make sense out of educations experience. Here Emerson gives us the prospective that combines these elements.

> *Nature hastens to render account of ourselves to the mind classification begins. To the young mind everything is individual stands by itself. By and by it finds how to joint two things and see in them one nature then three thousand then tyrannized over by its own unifying instinct it goes on tying things together diminishing anomalies, discovering roots running under ground whereby contrary and remote things cohere and flower out from one stem. It presently learns that since the dawn of history there has been a constant accumulation and classifying of facts. But what is classification but the perceiving that these objects are chaotic, and are not foreign, but have a law which is also a law of the human mind?*
>
> - (Emerson, "Nature," p. 80)

Although Emerson provides us the comprehensive sense of how the process works we still have limited understanding of that process according to Bodkon

> *The subject of learning is at present being researched on a scale far below that warranted by its importance and pervasiveness... a challenge for the year 2000 to understand how learning process work.*
>
> - (Botkin, p. 100)

**Thinking about Thinking**

In the educational process the most obvious area that people focus on is the nature of thinking or the thought process itself. Here quite a few thinkers provide intriguing ways to examine this phenomenon about thinking.

> *As a man thinks, so is he, so does he labor.*
>
> - (Huntly, p. 460)

> *Skill and systematic thinking which is the capacity to see the whole as well as its parts and to see multiple rather than single causes and effects.*
>
> - (Bodkin, p. 98)

The brain is an instrument that enables us to fulfill these various thought processes E. Lester Smith introduces the sense of the whole brain needed in the educational process.

> *There is no possible doubt that the human brain is a superb instrument representing the highest achievement of the evolutionary process thus far. Both components of the closely integrated mind-brain complex are essential for effective operation and the overall efficiency can be limited by either.*
>
> *We really have not just one brain but two, which normally work together but are sometimes in conflict.*
>
> - (E. Lester Smith, p. 33)

Given the nature of the brain and how it works in our current educational endeavors we look toward how we can incorporate technology that can enhance this thinking process. Here we work with ideas described by Ron Zemky:

> *The 1970's were a boom time for the new — and sometimes wacky-sounding—training ideas. Some have stood the test of time and become downright respectable: training by computer, the systems approach, the video cassette, andragogy, learning-centered instruction and distance learning come quickly to mind. Others, like transactional analysis, 16 mm film and behavior modifications have gone the way of long sideburns, sitar music, and the purple dress shirts.*
>
> - (Zemke, p. 93)

The approaches that have survived include the increased use of systems theory which is a basis that we're using in this paper as well, but also raises the issue of the relationship between humans and computers. Here again we return to the ideas of E. Lester Smith:

> *Can computers think? Answer to this popular questions range from an emphatic yes to emphatic no. Enthusiastic artificial inelegance researchers say that of course computers can think, wait til we have perfected the fifth generation and*

*sixth generation machines and they will be thinking better then we can. Not so sceptics fiercely avure of course computers cannot think, they are just machines with only a single basic faculty namely switches that are either on or off. They have no understanding, no inelegance, and tho they can be programmed to mimic inelegance.*

*To the question. "Can computers think?". the appropriate response would be "What do you mean by thinking?"*

*The machines will never understand what they have been taught to do. Nevertheless, they can be of enormous practical value. Qualitatively, computers can never approach the capabilities of a trained human mind. Best quantitatively they are already far surpassed the human brain and their fantastic speed of operations.*

- E. LEster Smith, pp. 20-22

*To sum up, computers deploy brute force and speed; brains deploy subtlety. It is not fruitful nor indeed meaningful to assess which approach is "best." Their skills are different and complementary; together they make a good team. Computers can supplement brains ana minds, but should never be expected to displace them, even in the distant future.*

- (E. Lester Smith, p. 28)

**Intuitative Leaps**

There is a danger in believing that the thought or thinking process will conquer all that its the be all and end all, but we need to recognize that it is only one part of our overall educational process.

*Thus the greatest scientific discoveries or philosophical conclusions often appear while the intellect itself is engaged*

- (Van der Leu, p. 14)

From an Eastern perspective we have a similar wisdom.

*The most efficient or effective way to overcome problems where adversity is by non-contingent or yielding which is not submission or capitulation but exercising control by taking the way of least resistance.*

- (Laozi, p. 9)

From the western prospective we begin to analyze this intuitive process according to E. Lester Smith,

*Many people engaged in brain research simply ignore the mind.*

*So do we think with he brain alone, are with the mind alone, or what the brain and the mind working together? Since thinking is the most characteristically human of all or activities and arguably the most interesting, we really ought to know the answer to these questions.*

*Information and ideas on modes of thinking, or the mind-brain problem, can be found in three broad areas of study. First comes research on the brain, the province of anatomy, neurophysiology, biochemistry, and surgery. Second comes research of the mind, the province of psychology and psychiatry. Finally comes philosophy, both Western and Eastern, including understanding gained by introspection and yogic meditation.*

- (E. Lester Smith, pp. 2-3)

The mind game problem is only the beginning aspect of this non-thinking process. The more significant is how intuition and intuitive leaps get us to a greater sense of creativity.

*Creativity is mainly an affair of the higher mind.*

*Logical thinking needs to be pursued to its limit. Only when this limit is reached and the mind falters and can make no further process may intuition come to the rescue with fresh inspiration and comprehension.*

(E. Lester Smith, pp. 170-171)

*But the higher levels of thinking enlightened by intuition far surpassed anything the most sophisticated computer can ever achieve.*

- (E. Lester Smith, pp .28-29)

The intuitive thinking allows the brain to associate ideas and to draw connections that normally wouldn't happen without such a process. Isaac Osmoff calls this the eureka phenomenon which he describes the way many significant sciences have achieved their particular insight. Individuals can achieve the same through brainstorming and through associates of thinking. Brainstorming provides one mechanism for achieving an intuitive leap in such an intuitative leap is essential to both discover or adapt a new technology or see the implications of technology and applying that toward educational precesses.

*There is only one rule in brainstorming; nobody criticize anything that is said however useless or even preposterous it may seem at firs hearing.*

- (E. Lester Smith, p. 169 )

The criticism during brainstorming intrudes the logical thinking process which prevent the intuitive leap. Brainstorming tries to encourage the widest range of associations so that we can make this intuitive.

Similar to brainstorming which often is a group process is the associative process which again, frees the mind to draw new connections which form the basis of intuitively.

> *The mind is encouraged to browse at random in closely related areas, or even in distant ones. This way of thinking may seem chaotic and self-indulgent; but it differs from mere daydreaming in that it is guided, however loosely, and that the mind assumes an attitude of watchfulness, "listening" for any hint of relevance to the problem in hand.*
>
> - (E. Lester Smith, pp. 168-169)

The mind in its logical capacity gives us proof after the fact, it does not lead to new insight to use technology to the greatest advantage. We need to find new insights and those incur through intuitive leaps.

**Classroom Practices Leading to Learning Strategies**

In working with high technology and incorporating high technology into the classroom we need to recognize some specific areas of mythology that often get overlooked. Here we rely on Paul Cooper and Donald Macintire to give us some valuable aids to learning:

> *Teacher making explicit the agenda the lesson;*
> *teacher recapping on previous lesson highlighting continuity between lessons.*
>
> - (Cooper and Macintire, p. 100)

Quite frequently in incorporating technology the teacher fails to help students to understand how one event connects with another and merrily presents a constant stream or sequence but effective teachers draw the connections. In drawing connections Earnest Wood gives us an idea here labeled under the heading memory training.

> *A new idea can come forward in thought only by linking itself with another already in mind.*
>
> *In such case we recommend the following broad rules as the means of linking, one when you link two ideas together always give a clear reason for their association to never invent any unnatural reason.*
>
> - (Wood, p. 14)

In the natural process of education, the teacher must mingle three different processes working with discreet items linking these together and keeping those analogical sequence as a way to develop the mind of the student. And the strategy for this process is called consecutive thinking. Here we rely on ideas coming from Annie Besant

> *Consecutive thinking though a step towards concentration is not identical with it. For in consecutive thinking the mind passes from one*

> *to another of a sequence of images and is not fixed on one alone. But as it is far easier then concentration the begetter may use it to lead up to the more difficult task.*
>
> - (Besant, p. 90)

**Developing Mental Habits**

In training the mind the educator needs to help students develop mental habits so that they may continue on their own rather then constantly rely on someone else for guidance. In developing these habits we need to overcome obstacles to concentration dealing with the wondering mind. Although we might think of the wondering mind as a phenomenon related to our M tv age and the association of sound bytes. We are dealing with a problem that is extremely ancient. Annie Bassont indicated this as early as 1918, but here she is referencing a source five thousand years earlier. The source that she is quoting is Arajouina.

> *Without doubt, O mighty armed, the mind is hard to curb and restless, but it may be curbed by constant practice and by indifference.*
>
> - (Arajouina, quoted by Annie Besant, pp. 93-94 )

Annie Besant continues in her own words,

> *The mind use to concentration contains always a certain positiveness and is not readily shaped by unlicenced intruders. How people who are training their mind should maintain an attitude of steady watchfulness with regard to the thoughts that "come to mind" and should exercise toward them a constant selection... This practice will so tune the mind that after a time it will act automatically.*
>
> *The mind is like a magnet attracting and repelling. The nature of its attractions and repulsions could be determined by ourselves.*
>
> *The habit of concentration will by itself tend to strengthen the mind.*
>
> - (Besant, pp. 84-95)

From the renaissance we also have similar ideas related to developing mental habits. Here from Juan Louie Vives

> *Memory is enlarged by exercise and*
>
> *Whether you read or whether you listen to it with attention, do not let your mind wonder but constrain it to be present and to do that thing which is here and no other.*
>
> - (Juan Luis Vive, p. 103)

**Creating a Strategic Methodology**

With an education, the teacher is in charge of the educational process and here provides the greatest impact. We look at the strategic methodology from the point of view of an overall strategy as well as specific ways of implementing such a strategy. Our overall process is quoted in Teaching The Elephant to Dance by James Balasco. Here Balasco is actually quoting a Japanese management expert in indicating the focal points for a process oriented manager:

- *Discipline*
- *Time management*
- *Skill development*
- *Participation and involvement*
- *Moral*
- *Communication*

- (MacKenzie, p. 242)

Within this overall broad strategy we look at ways to create the process that will be meaningful to the students. The first way of approaching this is through the power of visualization rather than working through abstractions the teacher tries to create vivid images for the students as stated by Thomas Troerg.

> *Some people poses the power of visualization or making mental pictures of things in a greater degree of others and by such this faculty may advantageously be employed to facilitate the realization of the working of the law.*
>
> - (Thomas Troerg, p. 43)

Using high technology, the teacher needs to build on this visualization by creating vivid images. These can include word pictures and include analogies comparisons. In essence the teacher must draw or paint the idea into the mind of the student. Also, reinforcing the image through vivid graphics through colorful overheads that emphasize key words and key concepts through dramatic power point with motion that vividly imprints the image on the mind of the student is essential.

The vividness of the process does not limit itself to the idea of visuals alone. Vividness needs to also capture the emotions and increase emotional involvement in the process. As Annie Besant indicated,

> *For the mind is continually impaled by desire and serves constantly as a minister of pleasure. That which gives pleasure is ever being sought by the mind.*
>
> -(Besant, p. 87)

A significant way of working with emotions is to incorporate humor. Humor provides a release for pressure and tension it resets the pace and livens the students and also

provides the opportunity so that the teacher does not become too serious in the process. Metcalfe and Falavie give us some insight to the use of humor:

> *Humor is then a set of survival skills that relieve tension keeping us fluid and flexible instead of allowing us to become rigid and breakable in the face of relentless change.*
>
> *Edward Debono... explained that humor and the creative processes are actually one and the same thing. With both forms of thinking - humor and general creativity - he said, the brain recognizes the value of the absurdities of the creative idea only in hind sight.*
>
> - (Metcalfe and Falabie, p. 9)

A final way of specific application of the overall strategy for education involves properly using rules. Even though educators are trying to give overall guidance to students there needs to be a recognition that we don't know everything and as human beings we are much more complex as Emerson indicated,

> *A rule is so easy that it does not need a man to apply it; in atonomation the machine can made to keep a school so.*
>
> - (Emerson, "American Scholar," p. 223)

The educator establishes the rules for the process and does this primarily through a syllabus which is a set of instructions and a listing of requirements. However, the educator needs to recognize that these rules are not ends in themselves. Rather there must be flexibility both to adapt to the specific needs of the student and the needs to the given occasion. Particularly allowance must be given for the students creativity to use these ideas as a way to develop the human mind and imagination.

The overall processes that the educator employs needs to combine strict principles of educational theory. Rules for process, engagement, and understanding of the human dimension of both the teacher as well as that of the student. Here we recognize ideas that come from hermeneutic philosophy:

> *But the hermeneutic teachings go much further then do those of modern science. They teach that all manifestations of thought, emotion, reason, will, or desire, or any mental state or condition or accompanied by vibrations. Portions of which are thrown off in which tend to effect the minds of other persons body induction.*
>
> - (Kabalian, p. 145)

One way of summarizing the entire process involved in education come from the great learning from X Utah Xuem

> *The task of great learning consist of three aims and eight steps:*

*The three aims are manifesting with ones luminous virtue renewing the people and the body in perfect goodness.*

*The eight steps are the investigation of things extension of knowledge, sincerity of the will, rectification of the heart, cultivation of the personal life, regulation of the family, national order, and world peace.*

- (Zengzi, p. 50)

*More over a role prescribes something that would not be natural otherwise - to prescribe what is natural is redundant. Since rules advise doing something unnatural there will always be someone who will refuse to comply. For a role to remain meaningful and not become an empty rule of compliance must be enforced.*

- (Laozi, p. 13)

## PUTTING IT ALL TOGETHER – EMBODIMENT

*There is never a beginning, there is never an end*

- (Emerson, "The American Scholar", p. 79)

The four elements described under purpose and method do not necessarily appear in a linear fashion. The teacher tends to switch back and forth in preparing for the educational experience. Eventually, all of the elements come together to produce the educational product. Embodiment captures this coming together of the diverse elements.

The coming together or the synergy of diverse elements is a staple among the wisdom writers here we begin with the hermeneutic philosophy that describes this integrating principle.

*The great Third Hermetic Principle — the Principle of Vibration — embodies the truth that motion is manifest in everything in the universe -- that nothing is at rest -- that everything moves, vibrates and circles. This Hermetic Principle was recognized by some of the early Greek philosophers who embodied it in their systems.*

- (Kybalion, Chapter 9)

The hermetic principle has become part of the accelerated learning process here taking a generalized concept and adding more specifics as Collon Rose indicates,

*Everything in the environment including color, sounds, textures, rhythms, shapes, even the appearance of the texture is significant in the learning process.*

> *"We orchestrate all these stimulating elements," says Bazarkov, "and emotional, physical and mental energies are blended to elicit the brains full capabilities.*
>
> *"The mind does not perceive just detailed bits and pieces, but is constantly weaving a large pattern from our experiences. If you feed it with multi-impression that are harmonized and orchestrated to achieve a specific objective, there's practically nothing it cannot learn.*
>
> - (Rose, p. 116)

The integration of diverse elements both from hermeneutic philosophy as well as from accelerated learning principles occur within an educational context and here Alfred North Whitehead describes this educational process

> *The best procedure will depend on several factors, none of which can be neglected, namely, the genius of the teacher, the intellectual type of the pupils, their prospects in life, the opportunities offered by the immediate surroundings of the school, and allied factors of this sort. It is for this reason that the uniform external examination is so deadly. We do not denounce it because we are cranks, and like denouncing established things. We are not so childish....Our reason of dislike is very definite and practical. It kills the best part of culture. When you analyze in the light of experience the central task of education, you find that its successful accomplishment depends on a delicate adjustment of many variable factors. The reason is that we are dealing with human minds, and not with dead matter. The evocation of curiosity, of judgment, of the poser of mastering a complicated tangle of circumstances, the use of theory in giving foresight in special cases -- all these powers are not to be imparted by a set rule embodied in one schedule of examination subjects.*
>
> - (Whitehead, p. 5)

The integrating principle that combines all of these diverse elements appears often in alternate terminology. George Arundale gives us an indication of this in using intuition as one of the integrating principles

> *There is the emotional body in which the feelings and the emotions live and move and have their being. There is the mind body, in which the mental functions exist. There is the intuitional body, specialized for the habitation and expression of that state of conscienceless which we call the intuition. And there are higher bodies still.*
>
> - (Arundale, pp. 30-31)

These integrated precesses have actually been studied for practical applications. An example of this practical application and learning process appears in an instructor handbook by the Federal Aviation Administration.

> *Initially, all learning comes from perceptions, which are directed to the brain by one or more of the five senses (sight, hearing, touch, smell, and taste). Psychologists have determined through experiments that*

> *normal individuals acquire about 75% of their knowledge through the sense of sight, 13% through hearing, 6% through touch, 3% through smell, and 3% through taste. They have also found that learning occurs most rapidly when information arrives through more than one sense.*
>
> - (Federal Aviation Administration, p. 4)

The integration from diverse sources, according to the wisdom authors leads to a tension among the diverse elements coming together. One part of the tension appears in the text of Confucius,

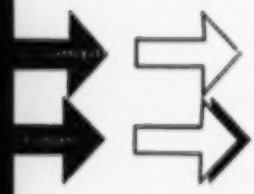
> *What the Great Learning teaches is -- to illustrate an illustrious virtue; to renovate the people; and to rest in the highest excellence.*
>
> - (Confucius, p. 356)

The rest indicated by Confucius can lead to a false sense of "having arrived," especially in addressing the needs of advanced technologies and the higher educated society. Rather than having arrived, we need to focus as Annie Besant indicated even as early as 1918:

> *Concentration is the means whereby the Jiva escapes from the bondage of forms and enters the Peace. "For him without concentration there is no peace," quoth the Teacher, for peace hath her nest on a rock that towers above the tossing waves of form.*
>
> - (Besant, p. 87)

The modern educator needs to take this position above the tossing waves to integrate the diverse elements needed to achieve the effect for the student. Clearly the methodology of lecture is not effective.

## THE EDUCATIONAL PRODUCT



> *The world of our experience is constantly transforming. Therefore we must be wary of our tendency to adopt fixed or dogmatic judgements, evaluations, and standards based on a narrow viewpoint, since this leads to conflict and frustration.*
>
> - (Chang Tzu, p. 21)

Ultimately, the educator creates the specific product, the educational lesson or the sequence of instruction. This objective product results in a particular lesson taught, a self-paced tutorial, a course as listed in a catalogue, an adult education lecture, or an entire degree program. Others can view the objective product, or use it in their own education.

Since we are dealing with student learning as the product and a paradigm shift as the process, we look for winning formulas.

*Coach Vince Lonbardi understood. He stressed "winning." "It's the only thing," he's been quoted as saying. But for Lombardi, "winning" meant being proud of your performance.*

- (Belasco, p. 238)

*Do not substitute sensationalism for learning.*

- (Heider, p. 23)

*You look like the end of a long, hard winter. You look like the breath of spring.*

*The helping professions are the true pros when it comes to reframing. In a skit on the Tonight Show on May 29, 1990, George Carlin described the psychological damage done to soldiers in war. In the first World War, it was called "shell shock." in World War II, it was "battle fatigue." and many years after the Vietnam War, we have "post-traumatic stress syndrome."*

*He also described a caricature of reframing: a dump is now a "landfill." Information became "directory assistance." a swamp is now "wetlands." toilet paper was renamed "bathroom tissue." A house trailer is called a "mobile home."*

*Sometimes a failure to understand the reframes that together give to words can be disastrous. In my city, a Chinese restaurant opened and was apparently named after a family. It was named Pflem's. It remained in business only a few months.*

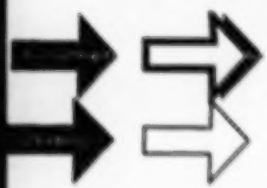
- (Rose, p. 68)

*If the root be in confusion, nothing will be well governed. The solid cannot be swept away as trivial, nor can trash be established as solid. It just doesn't happen.*

- (Doreal, p. 39)

It is clear that the student as the educational product must be motivated and directed through numerous challenging processes to obtain the learning in all areas of the holistic systems approach, which includes technology.

## THE LEARNING EXPERIENCE



*Nobody has all the answers. Knowing that you do not know everything is far wiser than thinking that you know a lot when you really don't.*

- (Hider, p. 20 )

Although the product itself is objective, the significance of the product lies in its interpretation. The lesson may be effective or ineffective, on target or off base. Students may like or dislike the lesson, remember it long term or forget it tomorrow; the student may be physically present but so preoccupied as to miss everything the teacher has said. Someone reading a text may be so "wrapped up" that the eyes have scanned a complete page with no information entering consciousness. Regardless of the objective output product, subjective reality describes where education happens. Despite our hopes for objectivity, education ultimately remains a subjective process. Education remains the lesson perceived and interpreted rather than the message sent. Ultimately, knowledge lies not in the lesson itself but in how that lesson affects others.

The interpretation portion reflects the fact that the educator has no ultimate control. The educator can provide the inputs to the process, control the actual functioning to a certain extent; but once the product is there, learning depends on how that lesson is interpreted by the students. Peter Woods begins to address this particular area in contemporary issues in teaching and learning:

> *We need to address the metacognitive skills of the students, and explore ways of giving them more control over their own learning. Only by breaking out of the myth of measurement can we engender the new kinds of capacities over a wide range needed in a rapidly changing society.*
>
> — (Woods, p. xx)

The interpretation of educational products leads naturally to the recognition that computers now have done much more. Computers have gone beyond mere voice recognition and response and now actually read the mind and from there put words onto the screen. This is real today based on prototypes now being developed in Japan. Regardless of this level of proficiency with the modern prototypes we still need to recognize an inherent limitation for computers.

> *Now its easy to answer the original question. Obviously computers are quite incapable of original creative thought. The crucial issue is that they cannot understand the meaning of their output.*
>
> - (E. Lester Smith, p. xxx)

Computers remain as tools extremely fast in their operation, extremely helpful in synthesizing large amounts of data but they still do not replace the need for human cognition and human understanding. But educational institutions must determine the best ways to use these tools:

> *According to the 1996 **Campus Computing Survey**, a national study of information technology [IT] use in higher education, instructional integration and user support are the two most important IT issues that American colleges and universities will confront over the next two to three years.*

> *... Yet according to the [this] survey, fewer than half of the U. S. colleges have a strategic plan for technology, and less than one-third have a related financial plan.*
>
> - (Weinstein, p. 1)

Regardless of the degree to which instruction uses computers, the educational process still needs the student to take a greater sense of control over the entire process.

> *The computer becomes the dynamic means for education. The computer provides additional ways to achieve self destruction and self development but ultimately, the computer will never replace the individual responsibility.*
>
> *No one can teach you but yourself.*
>
> - (Rose Collin, p. 117)

In taking responsibility for ones own education that requires that the individual becomes more aware of the self in the entire process. Here Guspensky in The Fourth Way gives us an indication of why someone may or may not be ready for education at a given time.

> *Q. Why is it that sometimes I find lectures interesting and sometimes not?*
>
> *A. Because you are in different centers. In one center you can be interested in another center you are not interested. Suppose you are in instinctive center; it cannot be interested in esoteric ideas it is interested in food and things like that. But if you are in the intellectual or partly in the emotional center, you can be interested. You know that we have four rooms in our house, and it depends on which room we are in whether we are interested or not.*
>
> - (Ouspensky, p. 65)

**Ways of Thinking**

In addition to being in multiple rooms the aware student needs to recognize that there are different ways of thinking. These ways of thinking will effect how we interrupt whatever it is that we are experiencing.

> *You must understand that in our system or in any system for that matter, whether it is acknowledged or not there are three different languages, or three ways of thinking: philosophical, theoretical and practical. When I say this is theoretical or this is philosophy in answer to a question, it means that the language is wrong. You cannot ask something in a philosophical way and expect a practical answer. An abstract question cannot have a concrete answer.*
>
> – (Ouspensky, p. 66)

The educational experience not only depends on the way we are thinking but how we are experiencing.

> *It mearily depends from what point of view you look at it and choose to experience it.*
>
> *An image is made up of misconceptions, distorted feelings, and physical blocks the conclusion drawn form distroted conception is a wrong conclusion.*
>
> — (Eva Pierrakos, pp. 9-10)

From a holistic point of view, again our interpretation depends on cognitive and effective processes. In addition the type of energy that we are experiencing or using at a given time will effect the outcome.

> *We must distinguish four energies working through us: physical or mechanical energy for instance, moving this table; life energy which makes the body absorb food, reconstruct tissues, and so on; psychic or mental energy, with which the centers work, and most important of all, energy of consciousness.*
>
> *For every thought feeling or action, of for being conscious, we must have corresponding energy. If we have not got it, we go down and work with lower energy.*
>
> - (Ouspensky, p. 68)

The application of energy depends on the individual preference at a given moment as well as the desire for conscious control.

> *Q. Why is it so difficult to control attention?*
>
> *A. Lack of habit. We are too accustomed to letting things happen. When we want to control attention or something else, we find it difficult, just as physical work is difficult if we are not accustomed to it.*
>
> - (Ouspansky, p. 68)

**Theory or Practice?**

> *My words are very easy to understand, very easy to practice.*
>
> - (Laozi, p. 12)
>
> *The ability to distinguish between theory and practice will save you much trouble.*
>
> - (John Hider, p. 129)

In applying the output of education, the student must be able to distinguish, among other things, types of philosophy, theoretical models, and ways of application. What are the priorities that the student must know?

> *Perhaps accuracy and keeness of judgement are the most important qualities to be educated. Knowledge the mind body must have, of course. But knowledge changes so rapidly in these days that one hesitates to say that the mind body must have facts. Are there any facts at all? Perhaps it would be more accurate to say that the mind body must as fully as possible be in touch with tendencies in every department of life, learning to hold them lightly so that out of them may emerge as time passes truer tendencies.*
>
> *Science itself is beginning to realize that the abstract more truly mirrors the Real than the concrete, and is tending in the direction of the abstract in its search for Truth.*
>
> *The body of the mind must be educated to distinguish easily between that which, for it, is true and that which, for it, is false.*
>
> - (George Rundell, pp. 34-35)

Questions of theory and fact are questions of truth and falsity. These questions reflect the philosophy that governs the interpretation of the educational event. Florence Huntley in *Harmonics of Evolution* gives us such a philosophy:

> *The philosophy here presented represents the modern masters of the law.*
>
> *This is a philosophy of action, as well as of introspection. It means the doing of that which is ethical. It calls for the exercise of reason and the practice of principles, as well as the indulgence of the emotions and development of the aesthetic testes. It looks to knowledge and goodness, as well as the culture and refinement. It means more than thinking or speculating or believing. It is living and learning and doing. It is a life, not a creed.*
>
> - (Huntley, p. 461)

The student can become more efficient in interpreting and integrating the diversity of theory and practice as well as integrating the technology in new applications. By learning to process information, the student will become increasingly more proficient in doing so.

Among the ways of learning to become more proficient in such interpretation is the non-conventional methods advocated largely through accelerated learning. Here we can use some significant ideas in the applications of accellerated learning recently presented by Ryan Hornbuckle:

***Brain Games***

> *Games that require more than just rolling the dice or spinning a wheel can stoke your brain with strategic, creative and visual power. Many of them will train you to respond more effectively to*

*new tasks and hone your existing skills, promoting greater through speed and precision. Your decision-making trigger wont stick as much, and tasks you once labored over may become easy. Games also tend to reduce stress because they're fun.*

***Artistic Intervention***

*Try drawing complex geometric figures to enhance spiritial and visual perceptions and skills. In their popular book Brain Power (Hougton, Mifflin, 1991), Vernon H. Mark, MD, and Jeffrey P. Mark suggest that the reader try various techniques to improve left - and right - brain communication, an important step in using more of your brain to learn.*

***Mozart for the Mind***

*How many times do you recall the lines of a song you haven't heard in 10 or 15 years? Did you ever wonder why? The answer is another justification for training right - and left - brain intercommunication. According to the Brain Power authors: "Versification and melody are generated chiefly in the nondominant or right hemisphere. When words [which originate in the left hemisphere in most right handed people] are put together with verse or song, the whole brain and its memory power are focused for optimal retrieval and use.*

***Mental Footwork***

*One final tip: Mix it up! Keep your brain moving and the left and right hemispheres working in concert. How effective, not to mention dull, would your physical exercise routine be if you always used only one muscle? Utilize all of these mental-acuity techniques, and neither you nor your brain would get bored. Do everything you can to power up your mental fitness. Make life easier. Most of all, make it memorable.*

- (Rose, p. 60)

**Advanced Learning for Wisdom, Genius, and Intuition**

*Things have their root and their branches. Affairs have their end and their beginning. To know what is first and what is last will lead near to what is taught in the Great Learning.*

- (Confucius, p. 357)

*Be thou not proud, Oh Man! In thy wisdom; discourse with the ignorant, as well as the wise. If one comes to thee full of knowledge, listen and heed, for wisdom is all.*

- (The Emerald Tablets of Toth the Atalantian, p. 17)

*True Wisdom is to judge a thing correctly and to identify it for what it actually is. Wisdom neither covets the cheap as though it were precious, nor rejects the precious as though it were worthless; neither criticizes matters deserving of commendation, nor commends things deserving of censure.*

- (Tobriner, p. 85)

*To believe your own thought, to believe that what is true for you in your private heart is true for all men, — that is genius.*

- (Emerson "Self-Reliance," p. 102)

*They look backward and not forward. But genius looks forward.*

- (Emerson "American Scholar," p. 83)

*The third duty of education will be to evoke and to develop the intuition.*

*When these three are developed and functioning, you will have a civilized, cultured and spiritually awakened human being. A man will then be instinctively correct, intellectually sound, and intuitively aware. His soul, his mind, and his brain will be functioning as they should and in right reflation to each other, thus again producing co-ordination and correct alignment.*

- (Bailey, p. 99)

As a way of synthesizing methods of determining information Bodkin provides a concluding summary.

*We will now proceed to define the nine kinds of relations between ideas, under which every possible relation between any two ideas may be placed.*

| | | |
|---|---|---|
| *1.* | *Division* | *When one idea includes another because of a common characteristic which has in part and the other in whole.* |
| *2.* | *Similarity* | *When two ideas or objects have something prominent in common.* |
| *3.* | *Contrast* | *When two ideas or objects have a prominent characteristic in common.* |
| *4.* | *Partition* | *When two things or ideas are respectively whole and part of some natural object or definition.* |
| *5.* | *Partnership* | *When two ideas or objects are different parts of the same whole.* |

| | | |
|---|---|---|
| 6. | *Analysis* | *When two objects or ideas are related as object to quality.* |
| 7. | *Affinity* | *When objects having the same prominent quality are linked together.* |
| 8. | *Coexistence* | *When two objects or ideas cling together in the mind merely as the result of personal experience or vivid imagination.* |
| 9. | *Succession* | *When two ideas cling together merely as the result of their being found to succeed each other in time, or to have a relationship of cause and effect.* |

- (Bodkin, pp. 19-21)

**A FEEDBACK SYSTEM**

Feedback provides the mechanism of change in a system. In an educational lesson, students react constantly and immediately to words, ideas, impressions, visual cues, tone of voice, and setting. Feedback may bring a smile of recognition, a frown of annoyance, a sigh of reflective contentment, a standing up shouting "How can you say such things!" Feedback may bring a restatement of ideas, an emphatic presentation of a controversial viewpoint, an interrupting with "Yes but," a reconsideration with a stated or implied "I hadn't thought of that," or a response to a hook "Tell me more." Standardized tests give feedback about overall student performance. Course critiques give more personalized student response to the educational process.

*There is no one, clear and certain resonation of these issues. Educational crises will not be resolved by short-term, simplistic solutions, but by reasoned discussion soundly based in theory and research.*

- (Woods, p. x)

The feedback process ultimately raises the issue of how do you assess the educational process. Assessment involves both assessing the teacher or the educator as well as assessing the student. The key element is to identify what the student has learned. Within the assessment process, we need to recognize not just a simplistic sense of testing the student to determine what the student knows; rather, we need to be open for how well the student is prepared for life-long experiences. Such assessment occurs not just in one point in time but it is on going to insure that education does indeed match different life opportunities.

*The lesson is clear: if lines of communication and learning are to be kept open, and goodwill maintained, both tutor/mentor and student must be willing to reflect on and take responsibility for their theories-in-use.*

- (Clackston, p. 268)

In completing the feedback on the educational process, educators need to recognize that they cannot become to full of their own self importance in the process, but need to keep the communication lines as clear and instinct as possible.

*5,4,3,2,1 Most Important Word(s)*

*Zigler (1989) describes the importance of recognition and respect by stating that the five most important words are "You did a good job." The four most important words "Can I help you?" The three most important words are "Would you please?" The two most important words are "Thank You." And the single most important word is "You."*

- (Wubbolding, p. 3)

## TOWARD A COMPREHENSIVE MODEL

The impact of technology on the educational process parallels such impact in the business world. Indeed, as Naisbit indicates in *Megatrends*, we have moved from the industrial age to the information age. Jason Frand and William Broesamle discuss how innovations in technology have lead to a paradigm shift in the education of future managers:

> *By all accounts, management in the twenty-first century will be enormously information intensive. Information technology (hardware, software, communications, and data availability) has already created an environment that inundates managers with data. Conceptual understanding, while essential, is not enough. To compete effectively, managers must be able to use models to structure and summarize relevant data and to make better business decisions. In other words, managers must be sufficiently versatile with data and models to be able to access, interpret, and analyze them, and to relate them -- through a deep, conceptual understanding - to their particular competitive circumstances.*
>
> - (Frand and Broesamle, p. )

Models thus serve essential functions in organizing and accessing information. Throughout this paper, we have organized ancient wisdom with the elements of the Rhetorical Systems Model. This model provides useful categories in one dimension. The communication process itself, however occurs at three levels:

individual -- student and teacher
organizational -- the educational environment
societal -- the local community, culture, state, or country

The model that we have used expands to include each of these levels. Following the extent of such a model lies beyond the scope of this paper. Nevertheless, we present

the Comprehensive Model of Communication as a way to organize all of the communication elements along the three levels.

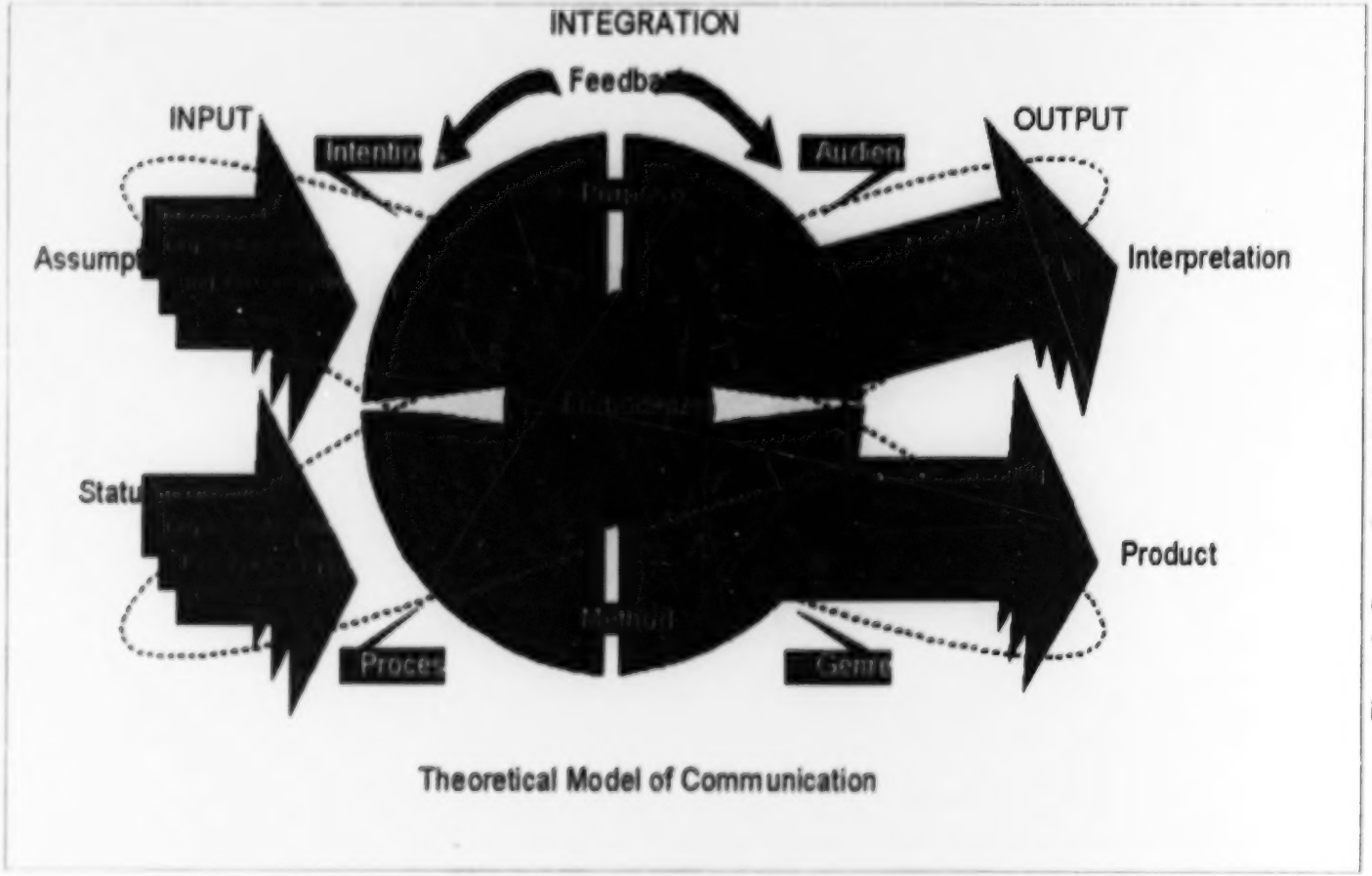



Figure 3: Comprehensive Model of Communication







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## CONCLUSION

By examining the words of the masters, both ancient and modern, we have come to recognize aspects of the educational process that has perhaps been overlooked, particularly if we have looked toward technology as the ultimate end rather than as one more tool in the educational process. Ultimately through education we need to develop independent thinkers who are prepared for life-long learning. As Peter Woods indicates,

> *Brown and Campione argue the need for critical, independent thinkers, especially in the new technological and globalized age with its rapidly changing information base. Rote learning, ever a prominent feature in our classrooms, will not do. We need to encourage critical thinking from the start, developing what the authors call `intellectual novices', helping them acquire metacognitive skills of reading, that is, understanding and evaluating the mean by which knowledge is acquired.*
>
> - (Wood, p. xvii)

In developing independent thinking, in contrast to rote learning, we are trying to achieve understanding, both on the part of the teacher and on the part of the student. As John Heider says,

> *Teach people to let go of their superficial mental chatter and obsessions. Teach people to pay attention to the whole body's reaction to a situation.*
>
> - (Heider, p. 23)

Heider recognizes the whole body as part of the process, not merely a mental or cognitive process. As Alan Chan continues,

> *Do not listen with the ear, but rather with the mind/heart. Do not listen with the mind/heart, but rather listen with the breath. . . . Emptiness is the fasting of the mind/heart.*
>
> - (Chan, p. 147)

From the Renaissance perspective, Juan Luis Vive advocates,

> *Do not strain merely to accumulate words, but rather to comprehend their meaning.*
>
> - (Juan Luis Vives, p. 106)

Applying one's whole self to the educational process is life-long, not instantaneous. Here, the *Book of Change* gives some insight into how this process occurs:

> *Frantic activity is not in order. Your responsibility instead is to be open and receptive to the Higher Power, allowing it to guide your actions. By allowing inferior thoughts and habits to pass away, you*

> *make room for an expansion of your superior qualities, which leads inevitably to good fortune*
>
> - (Book of Change, # 1, p. 5)

Continuing later on in this same work,

> *Human beings are no different. While we often desire rapid progress -- we want to change someone's mind* ***today****, obtain an apology* ***now****, achieve all our goals* ***immediately*** *-- sooner or later we must come to understand that the only lasting progress is gradual progress. Chien comes to urge you to accept that fact and base your thoughts, attitudes, and actions upon it.*
>
> - (Book of Change, # 53, p. 109)

> *Proper enthusiasm, on the other hand, is fueled by a devotion to attaining and expressing inner balance and inner truth. When your aim is not to influence others or to satisfy your ego but to follow the guidance of the Higher Power in all that you do, you acquire another kind of energy: a balanced and bottomless eagerness for living in step with what is right and good. In this there is true power and true grace.*
>
> - (Book of Change, # 16, p. 35)

Appealing to the whole personality brings us to the need for laughter:

> *Laughter feels so good as it does so much good -- all the physiological and biochemical reasons why a belly laugh works just like a drug to immediately lower blood pressure, ease the nervous stomach, and free up the mind for creative problem solving.*
>
> *One of the most significant discoveries Cousins reports is that sustained laughter stimulates an increased release of endorphins -- the body's own natural morphine.* ***We feel better when we laugh, because endorphins actually diminish physical and psychological pain****.*
>
> - (Metcalf, pp. 4, 11)

As we look at applying the wisdom of the ages to the modern educational process, we turn at times to accelerated learning as a mechanism that brings together multiple approaches, appeals to the whole of the personality. Summarizing the most important concepts in accelerated learning gives us a specific guide to action that we can take in adapting to our own educational environment.

***Core Principles***

The most effective learning takes place when the conscious and subconscious mind are unified.

People learn best when they are relaxed and enjoying themselves.

The "suggestive" part of the method works by tapping mental reserves that are present in everyone but hiding behind barriers.

***Basic Ingredients***

*Trainee "state" management* -- draw on curiosity, anticipation, suspense, confidence-building, delight, and exploration.

*Total immersion environment* -- create training "themes" appealing to all the senses; use music, stories, and suggestive decor to immerse the learner in the environment.

*Mind-set management* -- address learners' learning barriers and mental reservations at the outset

*Planed format variety* -- use memory keys such as music, rhyme, humor, and color to make the learning amenable to multiple styles.

*Participant-centered activities* -- involve learners in decision-making about course direction, methods, and schedules.

*Use suggestion* -- manage success and failure by subtly, subconsciously, suggesting positive outcomes and dispelling fear.

*Emotional Engagement* -- add affective elements to instruction, such as calls to action and celebration to cement learning at the visceral level.

***Elements***

*Human brain*
*Learning Environment*
*Music*
*Imagination*
*Suggestion*
*A positive mental state*
*The arts*
*Individual intelligence*
*Emotional state*
*Self-esteem*
*Learning objectives*
*Adaptability*
*Cooperation*

- (*Training*, p. 94)

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